| INFORMATION DISCLOSURE CITATION *(Use several sheets if necessary)* | Docket Number (optional) 12854-20365 | Application Number 10/816,346 |
|---|---|---|
| | Applicant(s) SIMMONS et al. | |
| | Filing Date April 1, 2004 | Group Art Unit 1724 |



**U.S. PATENT DOCUMENTS**

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---|---|---|---|---|---|---|---|
| | 1. | 5,653,945 | 08/05/1997 | GATHJE et al. | 423 | 26 | |
| | 2. | 6,210,648 | 04/03/2001 | GATHJE et al. | 423 | 26 | |
| | 3. | 5,837,210 | 11/17/1998 | SIMMONS et al. | 423 | 26 | |
| | 4. | 5,013,359 | 05/07/1991 | FAIR et al. | 75 | 744 | |
| | 5. | 5,411,148 | 05/02/1995 | KELEBEK et al. | 209 | 166 | |
| | 6. | 5,074,993 | 12/24/1991 | KERR et al. | 209 | 167 | |
| | 7. | 821,516 | 5/22/1906 | LOVETT | | | |
| | 8. | 5,653,945 | 08/05/1997 | GATHJE et al. | 423 | 26 | |
| | 9. | 809,959 | 01/16/1906 | KIRBY | | | |
| | 10 | 1,045,970 | 12/03/1912 | GREENWAY | | | |
| | 11. | 1,505,323 | 08/19/1924 | EBERENZ | | | |

**FOREIGN PATENT DOCUMENTS**

| | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation YES | Translation NO |
|---|---|---|---|---|---|---|---|---|
| | A. | AU-B-69283/87 | 01/02/1990 | AUSTRALIA | | | | |
| | B. | AU-A-39027/95 | 05/30/1996 | AUSTRALIA | | | | |
| | C. | 2,608,462 | 06/24/1988 | FRANCE | | | | |
| | D. | 833,320 | 05/30/1981 | SOVIET UNION | | | | |

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

| | | |
|---|---|---|
| | a. | Ferron, C.J. et al., "Mineralogy and Selective Upgrading of a Gold-Platinum Flotation Concentrate", EPD Congress 1994, Minerals, Metals & Materials Society, (1994), pp. 21-32. |
| | b. | Penberthy, C.J. et al., "The Recovery of Platinum-Group Elements From the UG-2 Chromitite, Bushveld Complex – A Mineralogical Perspective", Mineralogy and Petrology, Vol. 68, pp. 213-222 (2000). |

| EXAMINER | DATE CONSIDERED |
|---|---|
| T. Luther | 11/2006 |

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application

| INFORMATION DISCLOSURE CITATION *(Use several sheets if necessary)* | Docket Number (optional) 12854-20365 | Application Number 10/816,346 |
|---|---|---|
| | Applicant(s) SIMMONS et al. | |
| | Filing Date April 1, 2004 | Group Art Unit 1724 |

**U.S. PATENT DOCUMENTS**

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---|---|---|---|---|---|---|---|
| JA | 12. | 3,655,044 | 04/11/1972 | DELANEY | 209 | 167 | |
| | 13. | 3,834,896 | 09/10/1974 | EISELE et al. | 75 | 112 | |
| | 14. | 4,797,202 | 01/10/1989 | KLIMPEL et al. | 209 | 166 | |
| | 15. | 4,605,439 | 08/12/1986 | WEIR | 75 | 118 | |
| | 16. | 4,571,263 | 02/18/1986 | WEIR et al. | 75 | 101R | |
| | 17. | 4,571,264 | 02/18/1996 | WEIR et al. | 75 | 101R | |
| | 18. | 5,245,110 | 09/14/1993 | VAN DIJK et al. | 585 | 946 | |
| | 19. | 5,837,210 | 11/17/1998 | SIMMONS et al. | 209 | 166 | |
| | 20. | 5,855,770 | 01/05/1999 | CLARK et al. | 209 | 166 | |
| | 21. | 6,032,805 | 03/07/2000 | CLARK et al. | 209 | 164 | |
| JA | 22. | 6,036,025 | 03/14/2000 | CLARK et al. | 209 | 164 | |

**FOREIGN PATENT DOCUMENTS**

| | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation YES | Translation NO |
|---|---|---|---|---|---|---|---|---|
| JA | E. | 1,070,034 | 01/15/1980 | CANADA | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

| | | |
|---|---|---|
| JA | c. | Rybas, V. et al., "Ecological Outlook for the New Technology of the Copper-Nickel Ore Benefication Based on the Flotation with Nitrogen", XVIII International Mineral Processing Congress, Sidney-Australia, pp. 997-998, May 23-28, 1993. |
| JA | d. | Rybas, V.V. et al., "The Use of Nitrogen in the Benefication of Copper-Nickel Ores", USSR, Tsvetnaia Metallugica, Moscow (Non-Ferrous Metallurgy) 1989 (2), pp. 112-114. (English translation provided). |

| EXAMINER | DATE CONSIDERED |
|---|---|
| T. Luther | 11/2006 |

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application

| INFORMATION DISCLOSURE CITATION *(Use several sheets if necessary)* | Docket Number (optional) 12854-20365 | Application Number 10/816,346 |
|---|---|---|
| | Applicant(s) SIMMONS et al. | |
| | Filing Date April 1, 2004 | Group Art Unit 1724 |

**U.S. PATENT DOCUMENTS**

| *EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---|---|---|---|---|---|---|---|
| DH | 23. | 6,044,978 | 04/04/2000 | NEWELL et a. | 209 | 164 | |
| | 24. | 6,092,666 | 07/25/2000 | CLARK et al. | 209 | 164 | |
| | 25. | 2,052,214 | 08/25/1936 | BRINKER | | | |
| | 26. | 2,048,370 | 07/21/1936 | BRINKER | | | |
| DH | 27. | 2,070,076 | 02/09/1937 | BROWN | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**FOREIGN PATENT DOCUMENTS**

| | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation YES | Translation NO |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

| | | |
|---|---|---|
| DH | e. | Rybas, V.V. et al., "Industrial Use of Nitrogen in Ore Flotation in the Norilsk Benefication Plant", Tsvetnaia Metallurgila, Moscow (Non-Ferrous Metallurgy) 1990 (9), pp. 93-95. (English translation provided). |
| DH | f. | Simmons, G.L., "Flotation of Auriferous Pyrite Using Santa Fe Pacific Gold's N2 TEC Flotation Process," SME Annual Meeting, Denver Colorado, Feb. 24-27, 1997. |

| EXAMINER | T. Luthgen | DATE CONSIDERED | 11/2006 |
|---|---|---|---|

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application

| INFORMATION DISCLOSURE CITATION *(Use several sheets if necessary)* | Docket Number (optional) 12854-20365 | Application Number 10/816,346 |
|---|---|---|
| | Applicant(s) SIMMONS et al. | |
| | Filing Date April 1, 2004 | Group Art Unit 1724 |

| | | OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)* |
|---|---|---|
| *EXAMINER INITIAL | REF | |
| | g. | Talkington, Raymond W. et al., "Trends in the Distribution of the Precious Metals in the Lac-Des-Iles Complex, Northwestern Ontario", Canadian Mineralogist, Vol. 22, pp. 125-136 (1984). |
| | h. | Tarkian, M. et al., "Platinum-Group Elements In Porphyry Copper Deposits: A Reconnaissance Study, Mineralogy and Petrology", Vol. 65, pp. 161-183 (1999). |
| | i. | de Villiers, J.P.R. et al., A Mineraological Investigation of Ores from the Merensky Reef and Their Flotation Products National Institute For Metallurgy, Report No. 1966, 31st March, 1978, Reissued 31st March, 19/80. |
| | j. | Rao et al., "Electrochemistry in the Plant", Innovations in Flotation Technology, pp 57-100 (1992), Kluwer Academic Publishers, P Mavros and K A Matis (eds.) |
| | k. | Bogdanov, "Current Advances in the Theory and Practice of Flotation: Research Work Performed at the Mekhanobr Institute", Advances in Mineral Processing – edited by R. Sormasundaran (1986), pp 255-259, no month. |
| | l. | Nakazawa et al., "Effect of Pyrite-Pyrrhotite Contact on Their Flotabilities", Min erals and Metallurgical Processing, November 1985, pp. 206-211 |
| | m. | Burger. "Froth Flotation Developments: This Industry Workhorse Goes From Strength to strength, "E&MJ (Sept. 1983) pp. 67-75. |
| | n. | Onstott et al. "By-Product Molybdenum Flotation From Copper Sulfide Concentrate With Nitrogen Gas In Enclosed Wemco Nitrogen Flotation Machines," Preprint No. 84-65 (1984) Society of Mining Engineers of AIME, pp. 1-8. |
| | o. | "Berglund et al. " Influence of Different Gases in Flotation of Sulphide Minerals, "Proceedings of An Engineering Society Foundation Conference on Advances in Coal and Mineral Processing Using Flotation, (1989) pp. 71-76, Society for Mining Metallurgy and Exploration, Inc., Littleton, Colorado. |
| | p. | Martin et al. "Complex Sulphide Ore Processing with Pyrite Flotation by Nitrogen," International Journal of Mineral Processing, 26 (1989) pp. 95-110, Elsevier Science Publishers B.V., Amsterdam. |
| | q. | Jones. "Some Recent Developments in the Measurement and Control of Xanthate, Perxanthate, Sulphide, and Redox Potential in Flotation." International Journal of Mineral Processing, 33 (1991) pp. 193-205, Elsevier Science Publishers B.V. Amsterdam. |
| | r. | Berglund. "Pulp Chemistry in Sulfide Mineral Flotation." International Journal of Mineral Processing, 33 (1991) pp. 21-31. Elsevier Science Publishers B.V. Amsterdam. |
| | s. | Klymwsky et al. "The Role of Oxygen in Xanthate Flotation of Galena, Pyrite and Chalcopyrite." CIM, Bulletin for June. pp. 683-688 (1970) |
| | t. | Rao and Finch. "Galvanic Interaction Studies on Sulphide Minerals." Canadian Metallurgical Quarterly, Vol 27, No. 4, pp. 253-259 (1988). |

| EXAMINER T. Lithgow | DATE CONSIDERED 11/2006 |
|---|---|

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

| INFORMATION DISCLOSURE CITATION *(Use several sheets if necessary)* | Docket Number (optional) 12854-20365 | Application Number 10/816,346 |
|---|---|---|
| | Applicant(s) SIMMONS et al. | |
| | Filing Date April 1, 2004 | Group Art Unit 1724 |

| | | OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)* |
|---|---|---|
| *EXAMINER INITIAL | REF | |
| JF | u. | Rao et al. "Possible Applications of Nitrogen Flotation of Pyrite." Minerals, Materials and Industry (ed. M.T. Jones). Institute of Mining and Metallurgy. Pp. 285-293 (1990). |
| \| | v. | Rao et al. "Adsorpotion of Amyl Xanthate at Pyrrhotite in the Presence of Nitrogen and Implications in Flotation." Can. Metall. Q., Vol 30, No. 1 pp. 1-6 (1990). |
| \| | w. | Xu et al. "Sphalerite Reverse Flotation Using Nitrogen." Proc. Electrochem Soc., Vol 91-17, Proc. Int. Symp. Electrochem. Miner. Met. Process. III, 3rd, pp. 170-190 (1992) |
| \| | x. | Van Deventer et al. "The Effect of Galvanic Interaction on the Behaviour of the Froth Phase During the Flotation of a Complex Sulphide Ore." Minerals Engineering, Vol. 6, No. 12, pp. 1217-1229 (1993). |
| \| | y. | Author unknown, title unknown, Chapter IV, Gases and Aeration, pp. 63-70, date unknown. |
| \| | z. | Plaskin et al. "Role of Gases in Flotation Reactions." Academy of Sciences, U.S.S.R. Moscow, pp. 361-367, date unknown. |
| JF | aa. | Kongolo et al. "Improving the Efficiency of Sulphidization of Oxidized Copper Ores by Column and Inert Gas Flotation." Proceedings of COPPER 95-COBRE 95 International Conference, Volume II, The Metallurgical Society of CIM, pp. 183-196. 1995. |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

| EXAMINER | DATE CONSIDERED |
|---|---|
| T. Lithgo | 11/2006 |

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application